

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) Dispersants for aqueous suspensions A suspension comprising an aqueous suspension of solids and a CCT dispersant comprising random comb polymers obtained by free-radical copolymerization according to catalytic chain transfer method (CCT) of a vinylic poly(alkylene oxide) compound (A) of the general formula (I)



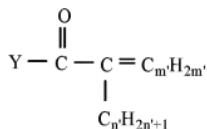
where

R^1 = hydrogen, a C_1 - C_{20} -alkyl radical, a cycloaliphatic C_5 - C_{12} -cycloalkyl radical, a substituted or unsubstituted C_6 - C_{14} -aryl radical,

m = 2 to 4,

n = 1 to 250,

Z =



Y = 0 or NR^2 ,

R^2 = hydrogen, a C_{1-12} -alkyl radical, a C_6 - C_{14} -aryl radical, $-C_mH_{2m}-(O-C_mH_{2m})_{n-1}OR^1$,

$m' = 1$ to 4 and

$n' = 0$ to 2,

with an ethylenically unsaturated monomer compound (B) of the general formula (II),



where

$R^3 = H, CH_3, COOH$ or a salt thereof, $COOR^7$ or $CONR^7R^7$,

$R^4 = H$, a substituted or unsubstituted C_6 - C_{14} -aryl radical,

$R^5 = H, CH_3, COOH$ or a salt thereof, $COOR^7, CONR^7R^7$, a substituted or unsubstituted aryl radical or $OR^8, PO_3H_2, SO_3H, CONH-R^9$,

$R^6 = H, CH_3$ or CH_3COOR^7 ,

$R^7 = H, C_1-C_{12}$ -alkyl, C_1-C_{12} -hydroxyalkyl, C_1-C_{12} -alkylphosphate or -phosphonate or a salt thereof, C_1-C_{12} -alkylsulfate or -sulfonate or a salt thereof, $C_mH_{2m}-(O-C_mH_{2m})_{n-1}OR^1$,

$R^8 =$ acetyl and

$R^9 = C_1-C_{12}$ -alkylphosphate or -phosphonate or a salt thereof, C_1-C_{12} -alkylsulfate or -sulfonate or a salt thereof,

R^3 and R^5 together form $-O-CO-O-$, the CCT dispersant is in an amount effective for providing the suspension with better water reduction capacity than with a non-CCT dispersant used in the same amount and which is a comb polymer having the same monomers, the non-CCT dispersant not obtained by a CCT reaction.

2. (Currently Amended) The dispersants suspension as claimed in claim 1, wherein the aryl radicals R¹ are substituted by hydroxyl, carboxyl or/and sulfonic acid groups.

3. (Currently Amended) The dispersants suspension as claimed in claim 1, wherein in the formula (I), m = 2 or 3 and n = 5 to 250.

4. (Currently Amended) The dispersants suspension as claimed in claim 1, wherein in the formula (I), m'=l and n'=0 or 1.

5. (Currently Amended) The dispersants suspension as claimed in claim 1, wherein in the formula (II), R³ and R⁴ = H, R⁶ = H, CH₃ and R⁵ = COOR⁷, PO₃H₂ or CONH-R⁹-SO₃H.

6. (Currently Amended) The dispersants suspension as claimed in claim 1, wherein in the formula (II), R³ and R⁴ = H, R⁶ = CH₃, R⁵ = COOH or a salt thereof or COOR⁷ and R⁷ = C₁-C₆-hydroxyalkyl.

7. (Currently Amended) The dispersants suspension as claimed in claim 1, wherein R⁵ is a carboxylic acid salt selected from among alkali metal, alkaline earth metal and ammonium salts

8. (Currently Amended) The dispersants suspension as claimed in claim 1, wherein the molar ratios of the vinylic poly(alkylene oxide) compound (A) to the ethylenically unsaturated monomer compound (B) have been set to from 1:0.01 to 1:100.

9. (Currently Amended) The dispersants suspension as claimed in claim 1,

wherein the comb polymers are used in an amount of from 0.01 to 5% by weight, based on the suspension of solids.

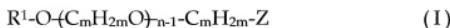
10. (Currently Amended) The dispersants suspension as claimed in claim 1, wherein the suspension of solids comprises hydraulic binders based on cement, lime, plaster of Paris and anhydrite.

11. (Currently Amended) The dispersants suspension as claimed in claim 1, wherein the suspension of solids comprises inorganic particles selected from the group consisting of ground rock, ground silicate, chalk, clays, porcelain slips, talc, pigments and carbon black.

12. (Currently Amended) The dispersants suspension as claimed in claim 8, wherein the molar ratios of the vinylic poly(alkylene oxide) compound (A) to the ethylenically unsaturated monomer compound (B) have been set to from 1:0.1 to 1:50.

13. (New) A method for making an aqueous suspension comprising solids and a CCT dispersant, the method comprising:

mixing particulate solids, water and a CCT dispersant, the CCT dispersant comprising random comb polymers obtained by free-radical copolymerization according to catalytic chain transfer method (CCT) of a vinylic poly(alkylene oxide) compound (A) of the general formula (I)



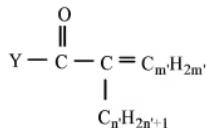
where

R^1 = hydrogen, a C_1-C_{20} -alkyl radical, a cycloaliphatic C_5-C_{12} -cycloalkyl radical, a substituted or unsubstituted C_6-C_{14} -aryl radical,

m = 2 to 4,

n = 1 to 250,

Z =



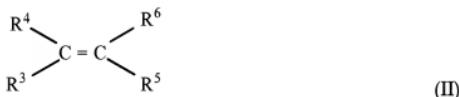
Y = 0 or NR²,

R² = hydrogen, a C₁₋₁₂-alkyl radical, a C₆-C₁₄-aryl radical, -C_mH_{2m}-(O-C_mH_{2m})_{n-1}OR¹,

m' = 1 to 4 and

n' = 0 to 2,

with an ethylenically unsaturated monomer compound (B) of the general formula (II),



where

R³ = H, CH₃, COOH or a salt thereof, COOR⁷ or CONR⁷R⁷,

R⁴ = H, a substituted or unsubstituted C₆-C₁₄-aryl radical,

R⁵ = H, CH₃, COOH or a salt thereof, COOR⁷, CONR⁷R⁷, a substituted or unsubstituted aryl radical or OR⁸, PO₃H₂, SO₃H, CONH-R⁹,

R⁶ = H, CH₃ or CH₃COOR⁷,

R⁷ = H, C₁-C₁₂-alkyl, C₁-C₁₂-hydroxyalkyl, C₁-C₁₂-alkylphosphate or -

phosphonate or a salt thereof, C₁-C₁₂-alkylsulfate or -sulfonate or a salt thereof, C_mH_{2m}-{O - C_mH_{2m}}-_{n-1}OR¹,

R⁸ = acetyl and

R⁹ = C₁-C₁₂-alkylphosphate or -phosphonate or a salt thereof,
C₁-C₁₂-alkylsulfate or -sulfonate or a salt thereof,

R³ and R⁵ together form -O-CO-O-.

14. (New) The method as claimed in claim 13, wherein the aryl radicals R¹ are substituted by hydroxyl, carboxyl or/and sulfonic acid groups.

15. (New) The method as claimed in claim 13, wherein in the formula (I), m = 2 or 3 and n = 5 to 250.

16. (New) The method as claimed in claim 13, wherein in the formula (I), m'=1 and n'=0 or 1.

17. (New) The method as claimed in claim 13, wherein in the formula (II), R³ and R⁴ = H, R⁵ = H, CH₃ and R⁶ = COOR⁷, PO₃H₂ or CONH-R⁹-SO₃H.

18. (New) The method as claimed in claim 13, wherein in the formula (II), R³ and R⁴ = H, R⁵ = CH₃, R⁶ = COOH or a salt thereof or COOR⁷ and R⁷ = C₁-C₆-hydroxyalkyl.

19. (New) The method as claimed in claim 13, wherein R⁵ is a carboxylic acid salt selected from among alkali metal, alkaline earth metal and ammonium salts.

20. (New) The method as claimed in claim 13, wherein the molar ratios of the vinylic poly(alkylene oxide) compound (A) to the ethylenically unsaturated

monomer compound (B) have been set to from 1:0.01 to 1:100.

21. (New) The method as claimed in claim 13, wherein the comb polymers are used in an amount of from 0.01 to 5% by weight, based on the suspension of solids.

22. (New) The method as claimed in claim 13, wherein the suspension of solids comprises hydraulic binders based on cement, lime, plaster of Paris and anhydrite.

23. (New) The method as claimed in claim 13, wherein the suspension of solids comprises inorganic particles selected from the group consisting of ground rock, ground silicate, chalk, clays, porcelain slips, talc, pigments and carbon black.

24. (New) The method as claimed in claim 20, wherein the molar ratios of the vinylic poly(alkylene oxide) compound (A) to the ethylenically unsaturated monomer compound (B) have been set to from 1:0.1 to 1:50.

25. (New) The method as claimed in claim 13, wherein the CCT dispersant is in an amount effective for providing the suspension with better water reduction capacity than with a non-CCT dispersant used in the same amount and which is a comb polymer having the same monomers, the non-CCT dispersant not obtained by a CCT reaction.

26. (New) The method as claimed in claim 25, wherein the CCT dispersant is in an amount effective for providing the suspension with better water flowability as measured by slump flow than with a non-CCT dispersant used in the same amount and which is a comb polymer having the same monomers, the non-CCT dispersant not obtained by a CCT reaction.

27. (New) The suspension as claimed in claim 1, wherein the CCT dispersant is in an amount effective for providing the suspension with better water flowability as measured by slump flow than with a non-CCT dispersant used in the same amount and which is a comb polymer having the same monomers, the non-CCT dispersant not obtained by a CCT reaction.